

SESSION 2.2: *Incorporating DRR Into S&S Activities*





**ONCE AGAIN, If You Don't
Think Shelter Is
Important...**

The Mandate for DRR

- Mandate: Save Lives, Reduce Suffering, and *Reduce the Economic Impact of Disasters* (OFDA's "Third Phrase")

DRR is part and parcel of our mandate!

DRR Defined

Actions intended to minimize the adverse impacts of hazards, through avoidance (via prevention) or limitation (via mitigation and preparedness), within the broader context of recovery and sustainable development.

De-mystifying DRR: It's *NOT NEW!*

- "A stitch in time saves nine."
- "An ounce of prevention is worth a pound of cure."
- **ANY OTHERS???**

WHY DO DRR?

- Pure and simple, if we don't engage in DRR, we're not supporting OFDA's mandate. Instead, our (in)actions may well reduce lives, save suffering for another day, and increase the economic impacts of disasters
- Can reduce relief costs (Kinshasa)
- We have to; it's the law!

How Do We Do DRR?

- Incorporating DRR Thinking into relief projects
- Developing stand-alone DRR Projects
- Developing DRR Programs (project packages)

WHEN DOES OFDA "DO" DRR?

- **BEFORE** a Disaster
- **DURING** a Disaster
- **AFTER** a Disaster

Therefore, ALL THE TIME!

An aerial photograph of a city, likely Lima, Peru, showing a dense urban area with a prominent skyscraper and a river valley. In the background, there are mountains under a hazy sky. The text is overlaid on this image.

Hazards and Disasters are NOT the Same!

What's a Hazard?

- The potential occurrence of a natural process or human-caused event that can generate negative impacts.

What's a Disaster?

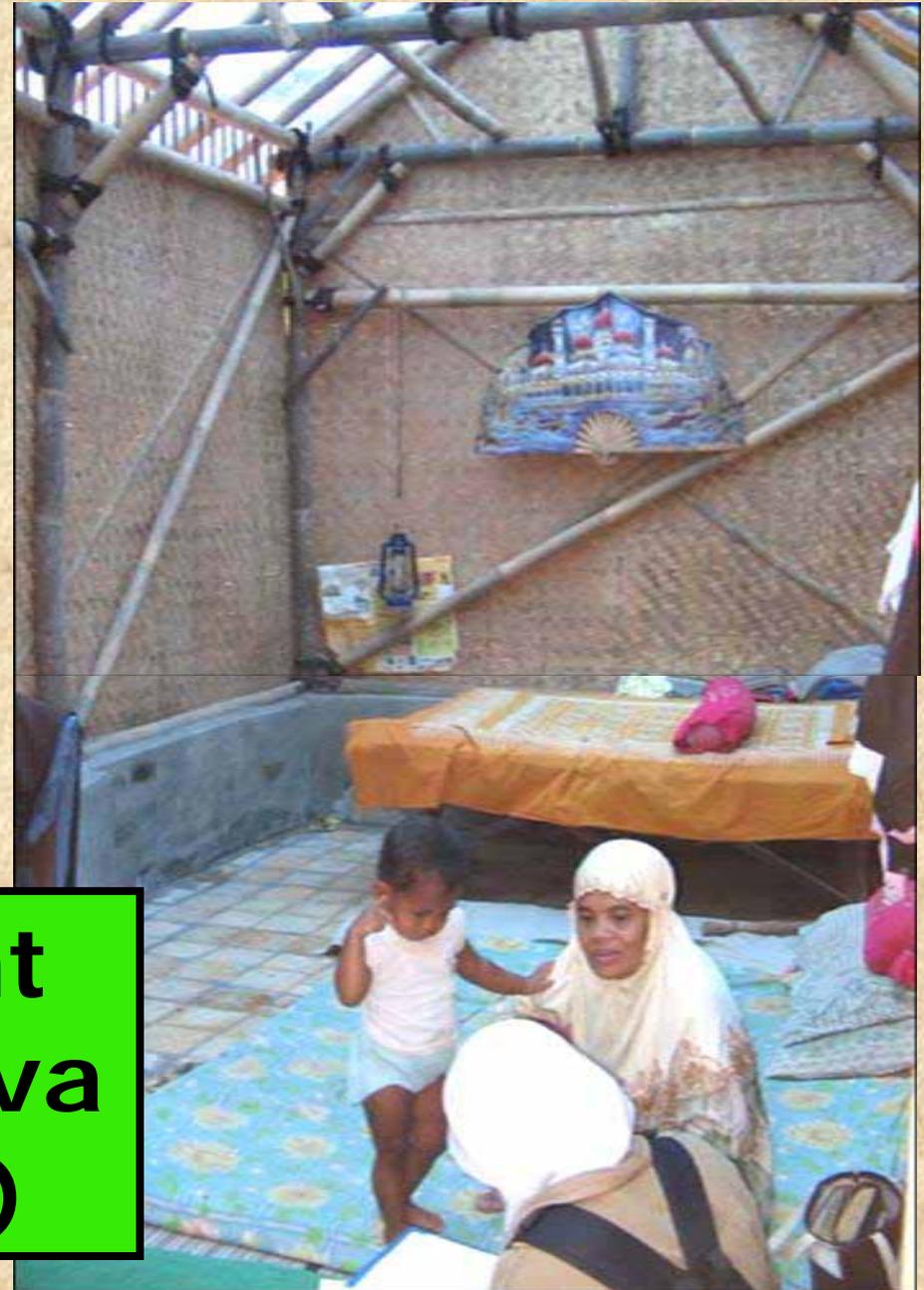
- A natural process or human-caused event which deprives people of life, health, livelihood, or property, with which the affected country cannot cope.



**Incremental Rebuilding
Begins Before "We" Arrive;
Support *and* DRR Needed**

2006 Central Java EQ

- Approx. 5,800 dead, 39,000 injured
- 359,000-578,000 houses damaged or destroyed, with at least **TRIPLE** the displacement of Aceh
- Lower end of range was 30% **GREATER** than Aceh total
- 36% of housing in most impacted area was damaged or destroyed; in Aceh 34%



**EQ-Resistant
T-Shelter, Java
(\$210/unit)**

DRR "Opps" with "TS"

MARI MEMBANGUN RUMAH CIKAL DARI BAMBU

Jangan membangun rumah di lereng yang terlalu terjal. Pastikan pemilihan lokasi dibangun. Pastikan pemilihan jenis bambu yang tepat.

Pastikan ukuran bambu yang digunakan sesuai dengan standar.

Bambu bambu yang digunakan harus memiliki diameter yang sama. Jangan bambu yang sudah patah. Jangan bambu yang sudah busuk atau terinfeksi. Pastikan bambu terpeliharasi.

Peringatan
Pastikan bambu yang digunakan saat dibuat struktur harus memiliki diameter yang sama. Pastikan bambu yang digunakan sudah terpeliharasi.

Bracing / penopang silang

Gunakan penopang silang agar struktur rumah tidak roboh akibat gempa.

Pastikan bambu yang digunakan saat dibuat struktur harus memiliki diameter yang sama. Pastikan bambu yang digunakan sudah terpeliharasi.

Profil dan kolom

Buat balok profil pada kolom (20 cm x 20 cm) agar bambu terikat dan ada di atasnya.

Bambu bambu paling baik adalah yang ukuran sedang untuk rumah tinggal.

Untuk bambu yang digunakan sebagai tiang, pastikan bambu yang digunakan sudah terpeliharasi.

Dinding

Buatlah dinding rumah yang menggunakan bambu dan lumpur.

Gunakan bambu yang sudah terpeliharasi dan ukuran sedang untuk rumah tinggal.

Arahan

Gunakan profil aluminium yang ringan. Jangan gunakan bahan berat sebagai atap rumah.

Jangan membangun rumah di lereng yang terlalu terjal.

Gunakan profil aluminium yang ringan. Jangan gunakan bahan berat sebagai atap rumah.

Gunakan bambu yang sudah terpeliharasi dan ukuran sedang untuk rumah tinggal.

Pastikan sambungan rumah yang dibuat sudah terpeliharasi.

Gunakan bambu yang sudah terpeliharasi dan ukuran sedang untuk rumah tinggal.

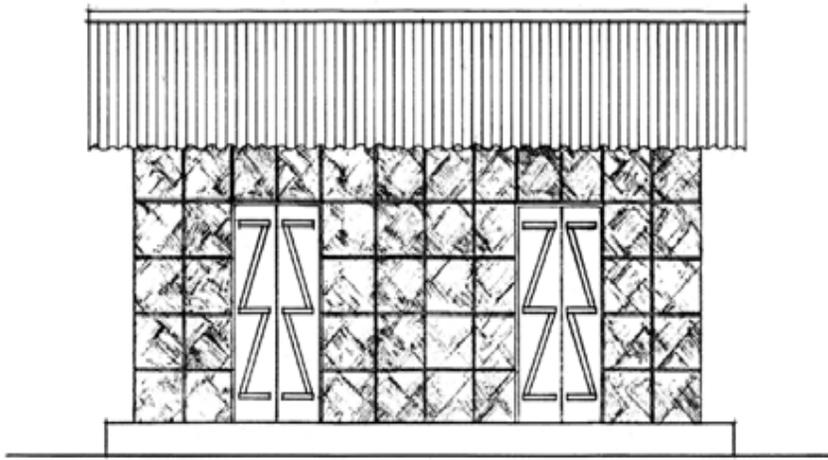
Penggunaan material bekas

Gunakan material bekas yang sudah terpeliharasi. Jangan gunakan material yang sudah rusak.

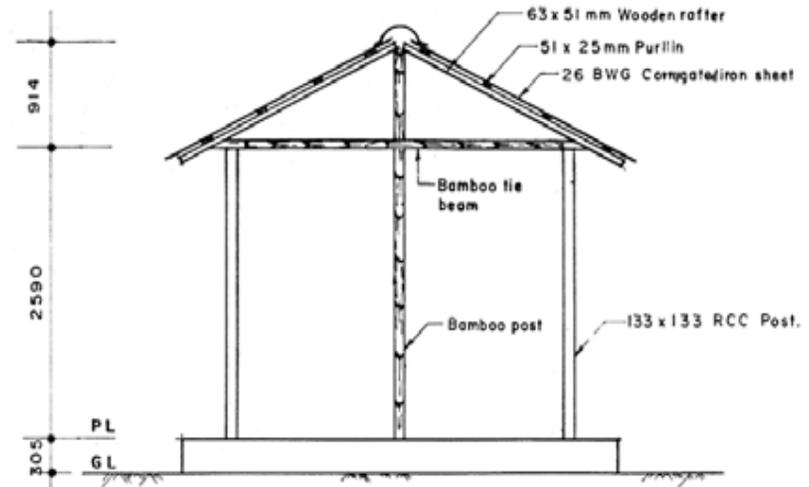
Jenis bambu yang digunakan untuk rumah tinggal adalah bambu yang sudah terpeliharasi dan ukuran sedang.



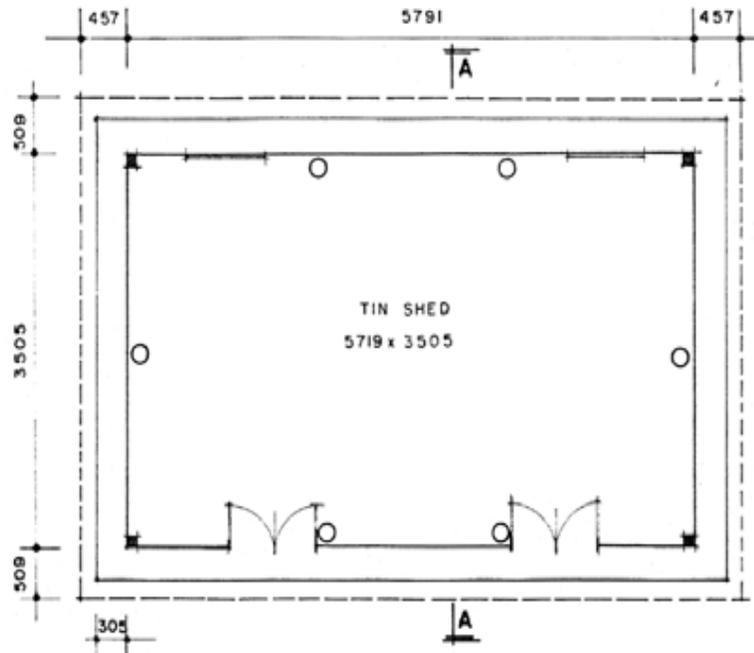
Cyclone Sidr, 11 '07



FRONT ELEVATION
SCALE 1:50

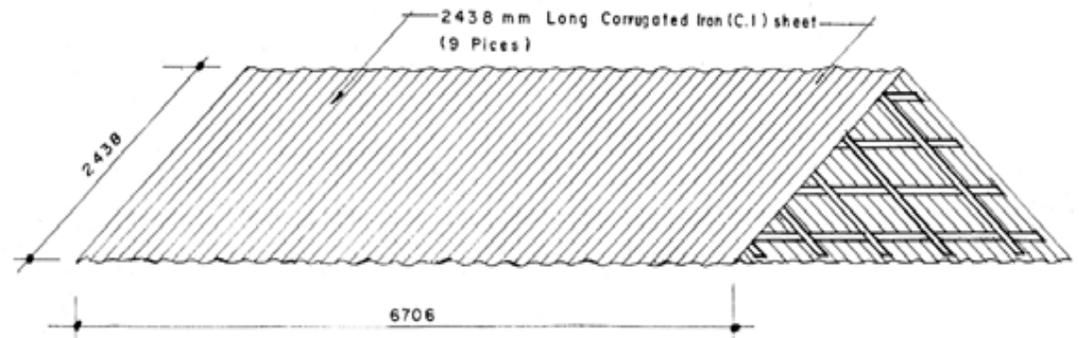


SECTION A-A
SCALE 1:50

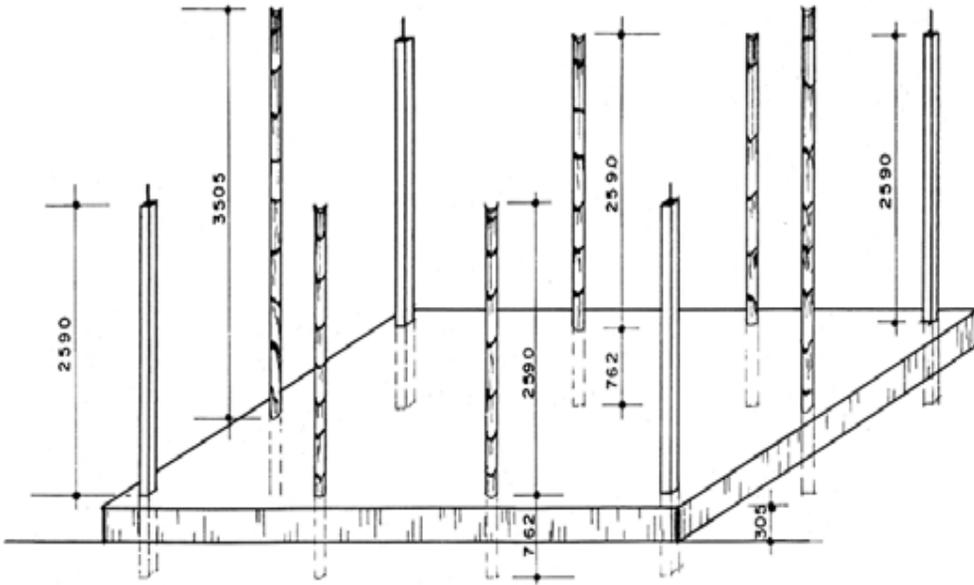


PLAN
SCALE 1:50

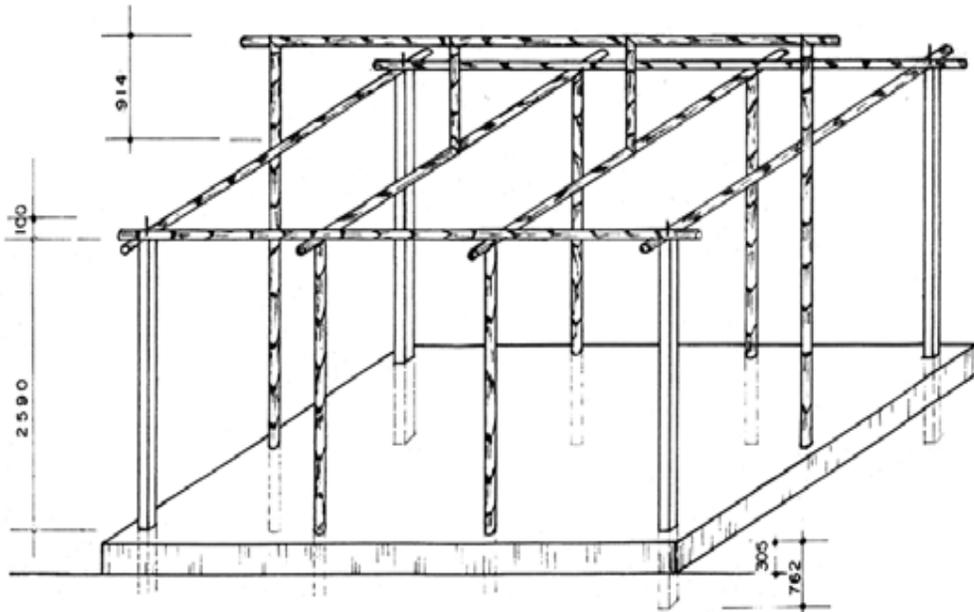
Basic GB Design



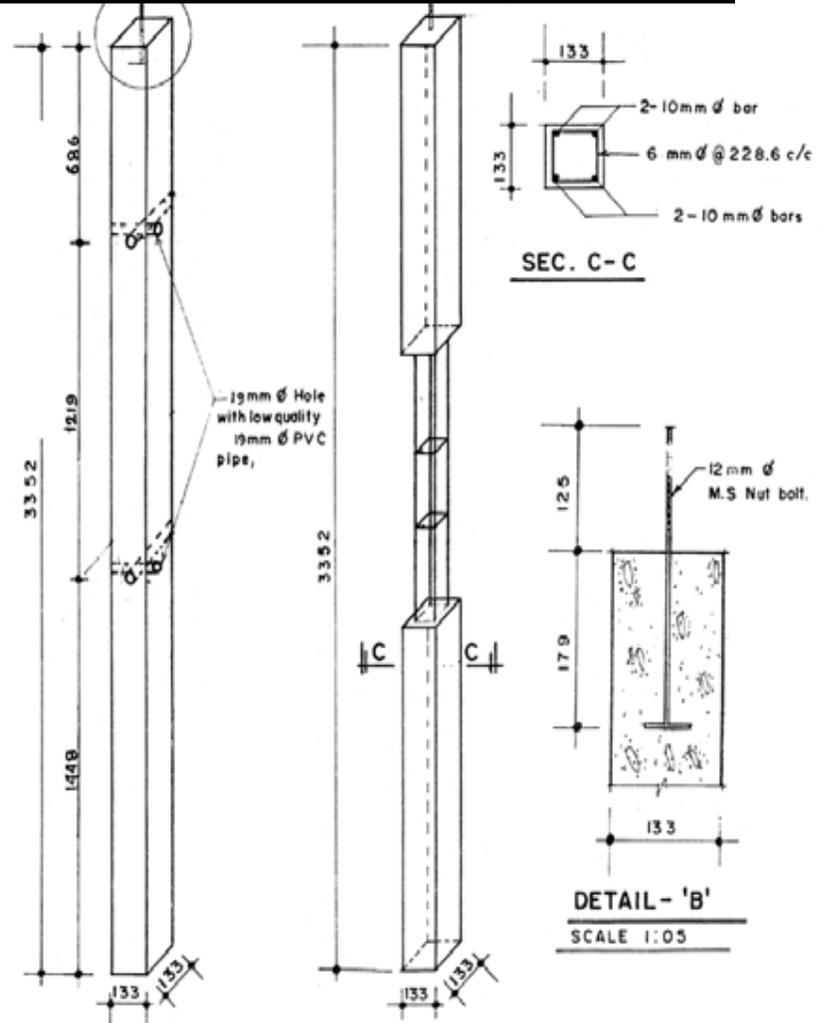
... ADAPTED



POSITION OF POST
SCALE 1:50



FRAME OF TIN SHED HOUSE
SCALE 1:50

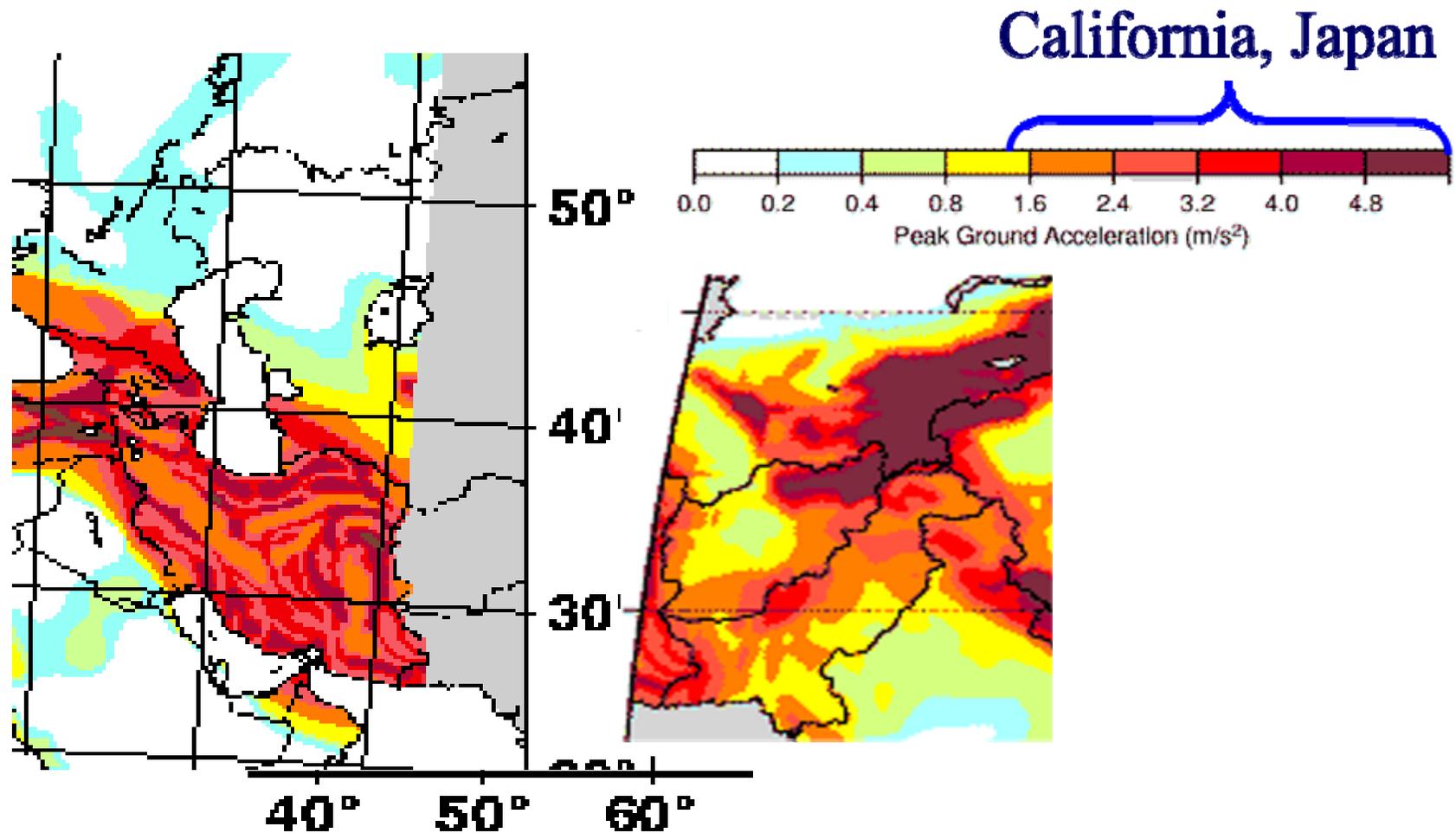


133x133 R.C.C. POST
SCALE 1:20

RE-BAR DETAIL OF R.C.C. POST
SCALE 1:20

Seismic Risk in Afghanistan

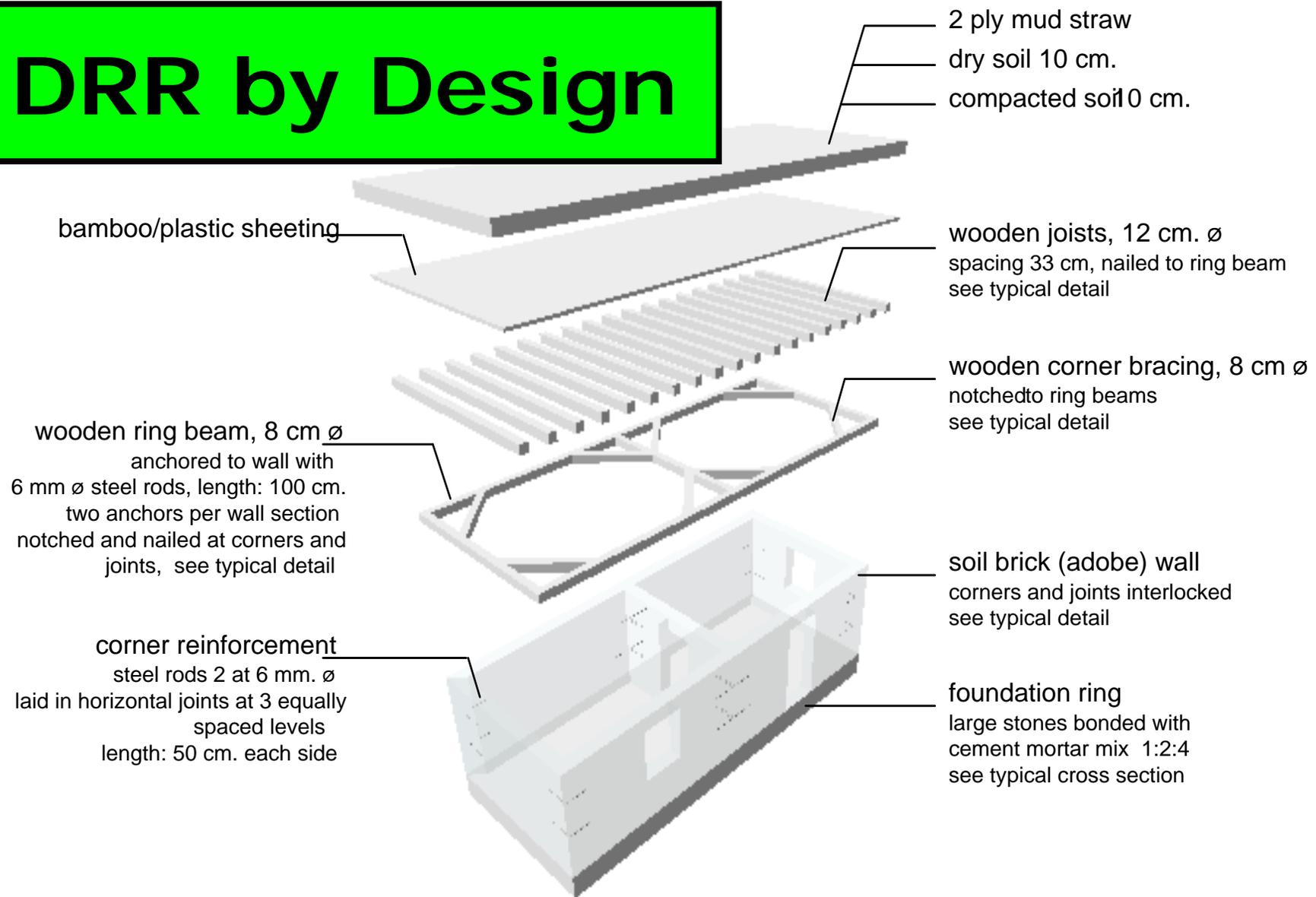
Higher Risk = Reds & Browns



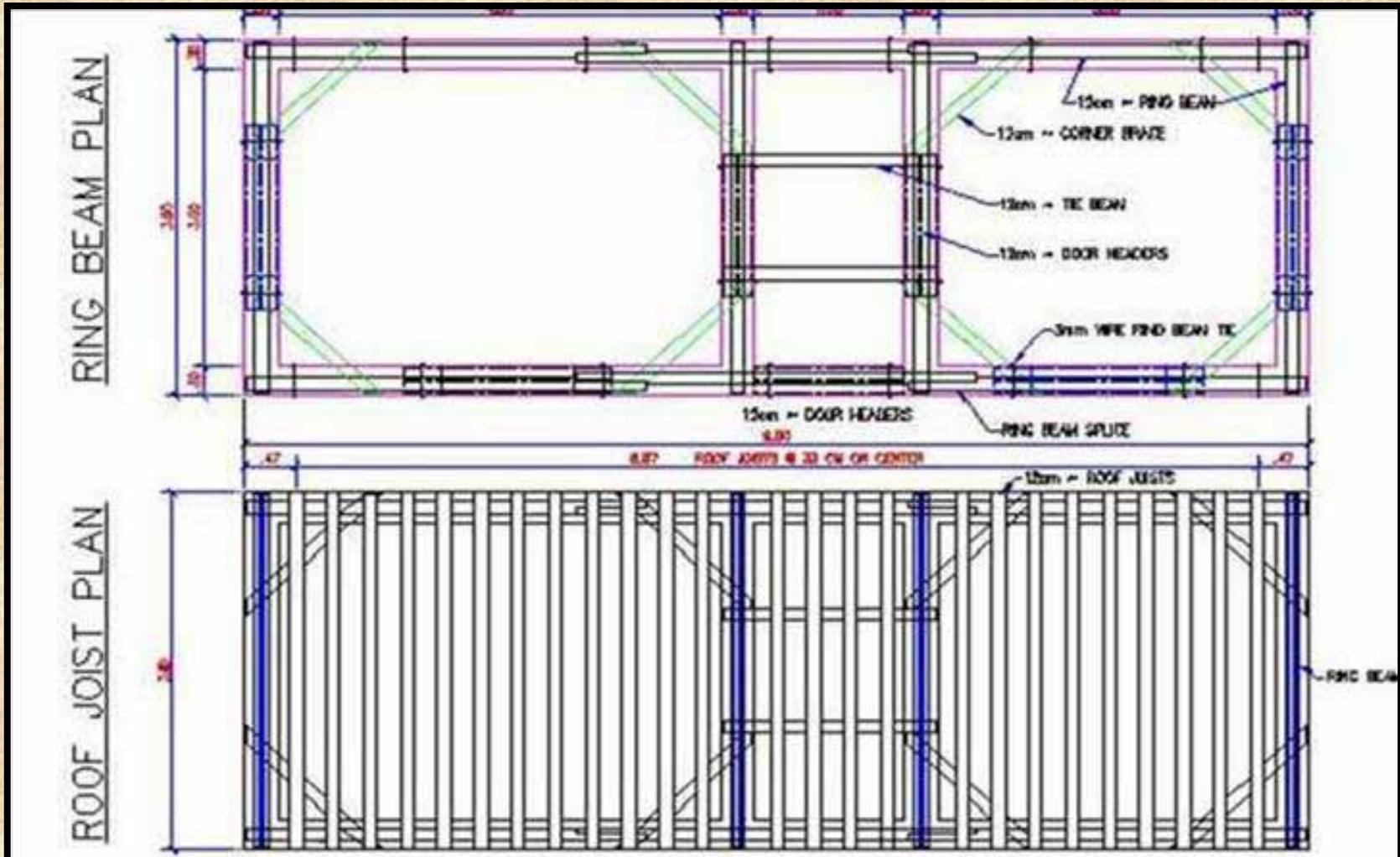


**A Response: Seismic-Resistant
Transitional Shelter**

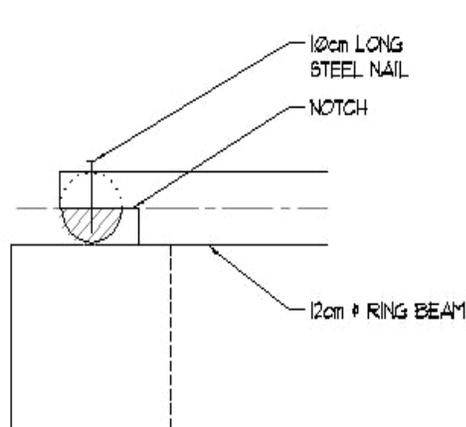
DRR by Design



*Per Sphere Project, 7 persons/HH, @ 3.5 sq.m. of
"covered living space"/person = 24.5 sq.m./HH*

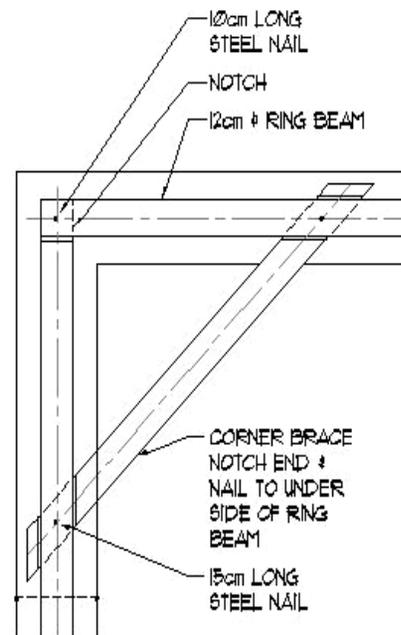


Protection & DRR in Action



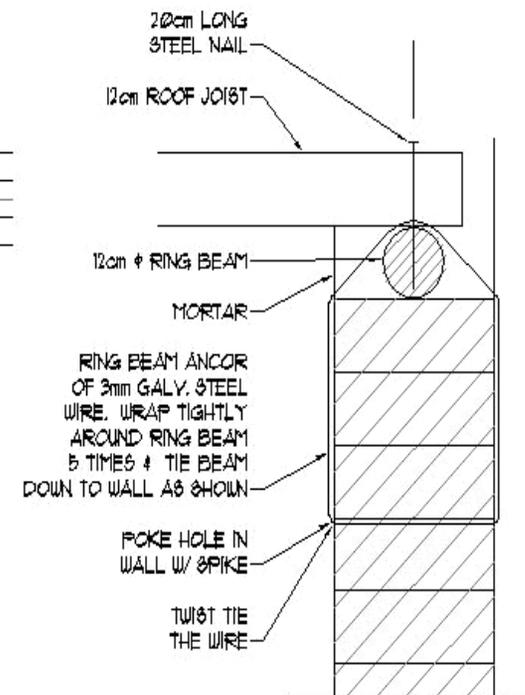
RING BEAM

SCALE: 1 : 12.5



CORNER BRACE

SCALE: 1 : 25

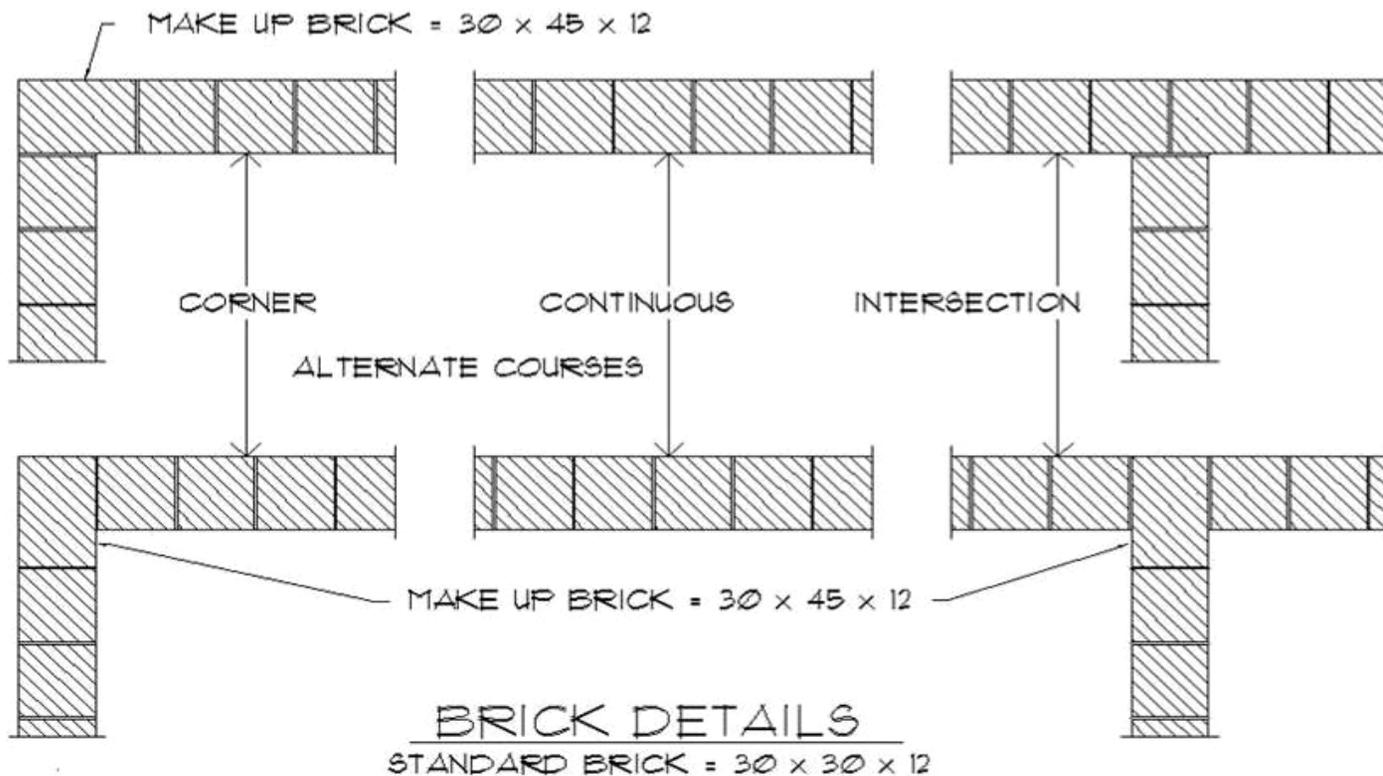


RING BEAM TIE

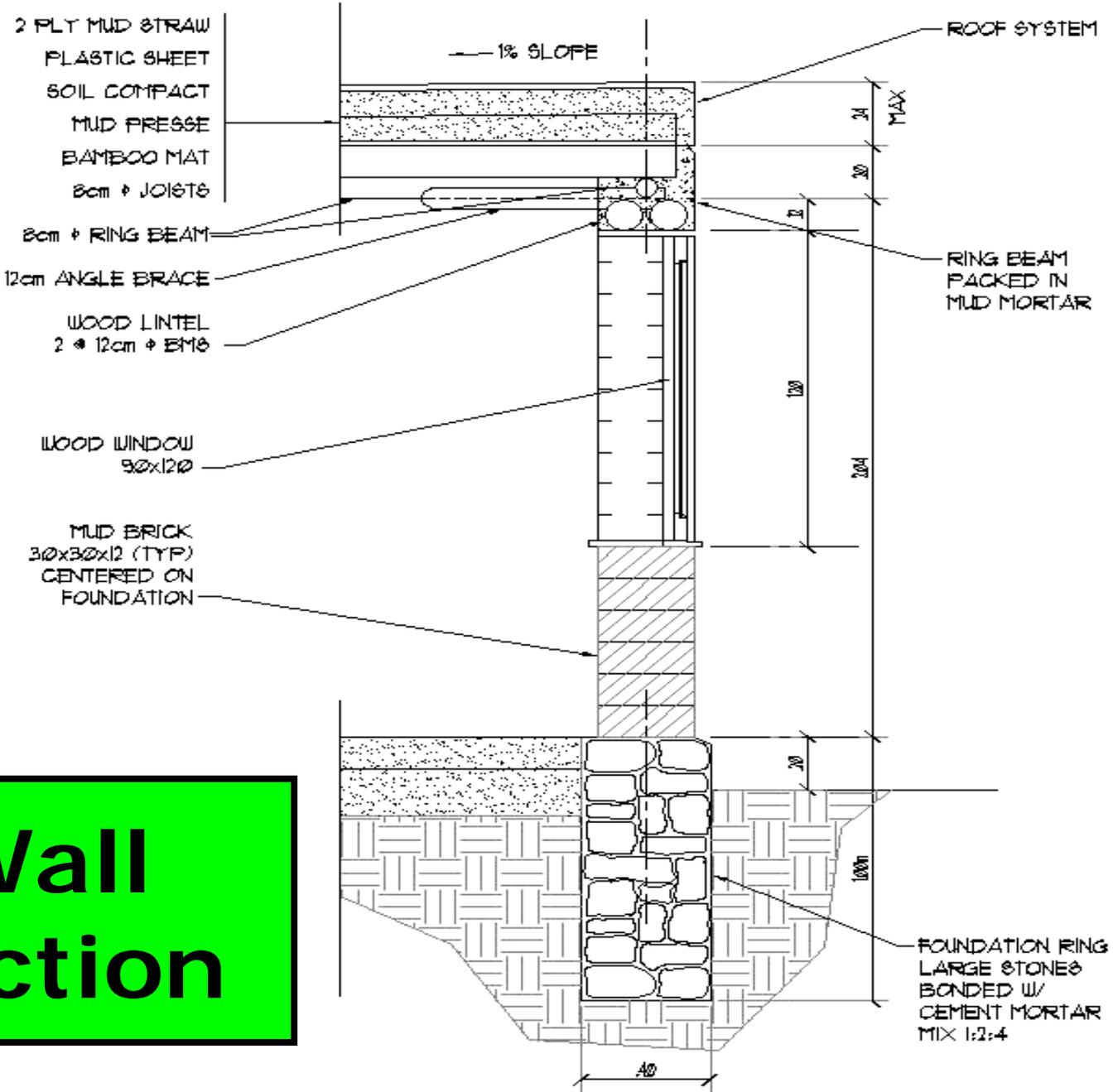
SCALE: 1 : 12.5

Detail of Connected and Braced Ring Beam, and Roof Tied to Walls

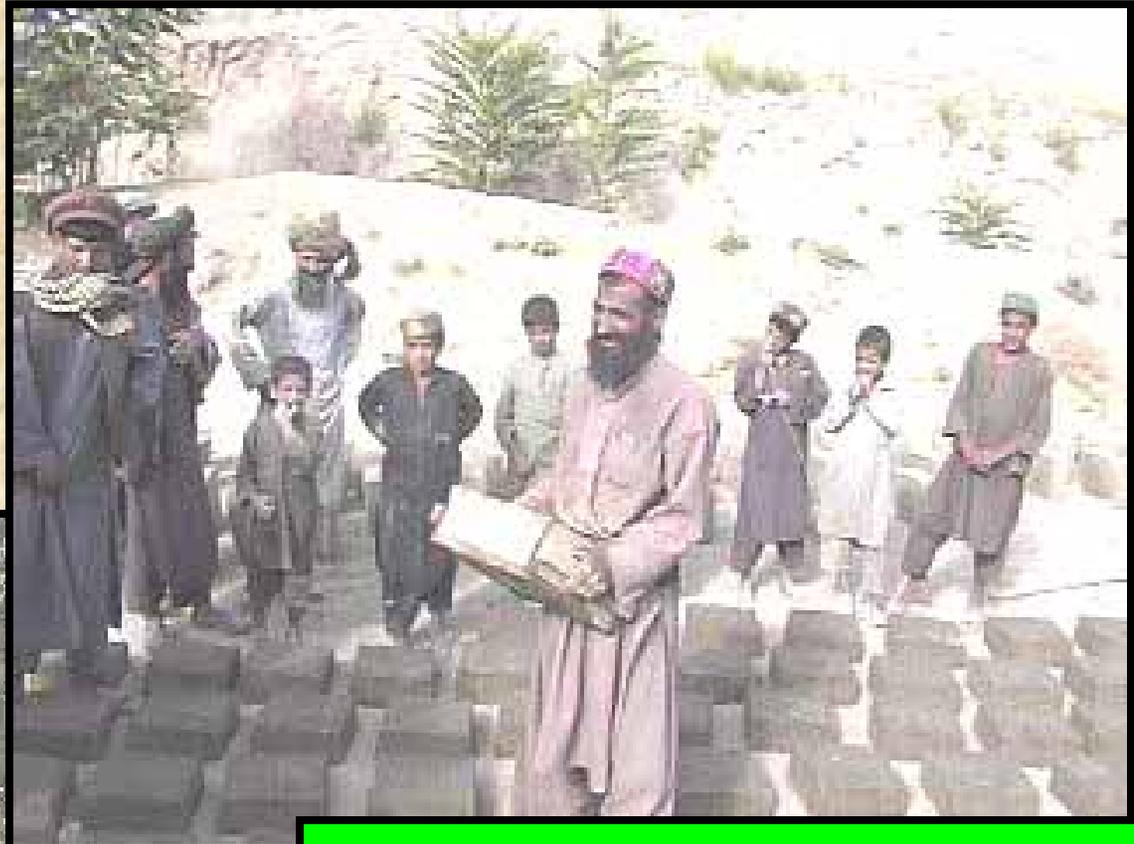
Detail of Bricks Overlapping in Successive Courses, Interior Walls Tied to Exterior Walls



Wall Section



DRR in Action



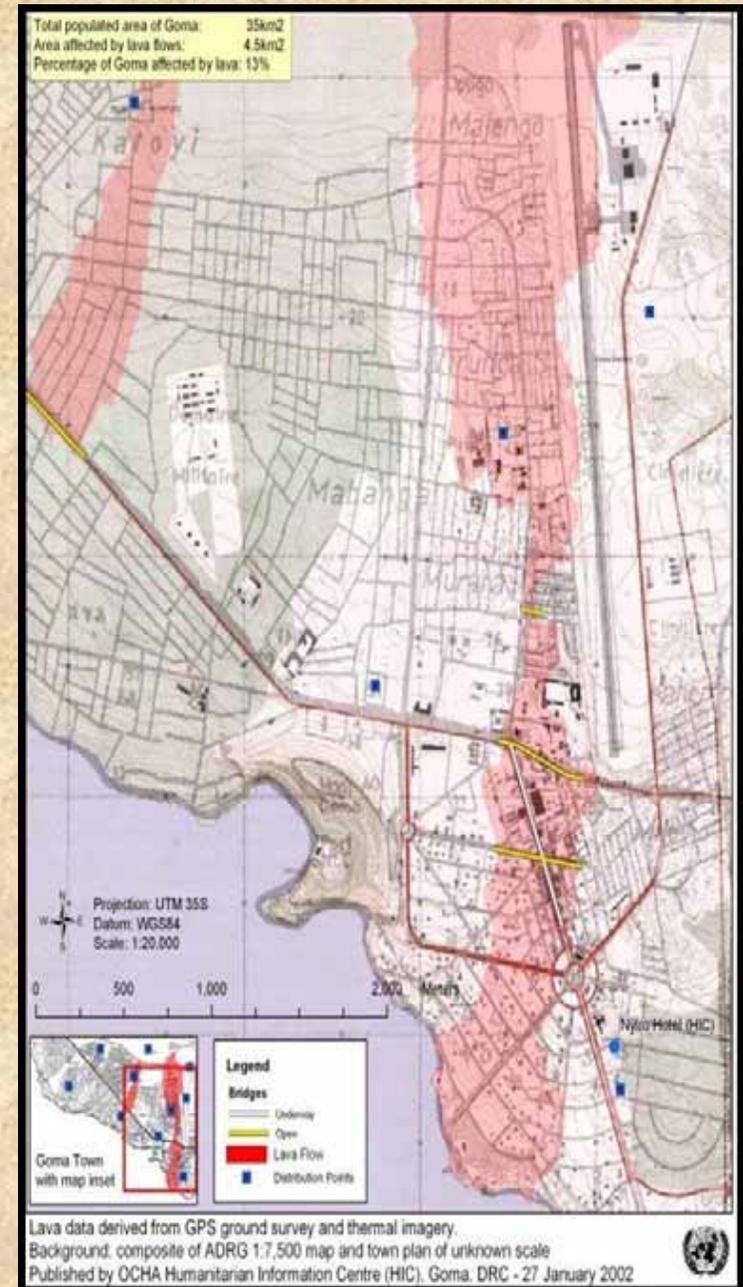
**Stone Foundation!!
Training in Block
Making and
Construction**

**Landslides Like This Indicate
Need for DRR at Structure and
Settlement Levels. In One
Project, 3 of 76 Villages, and
Portions of 20 Others, Moved**

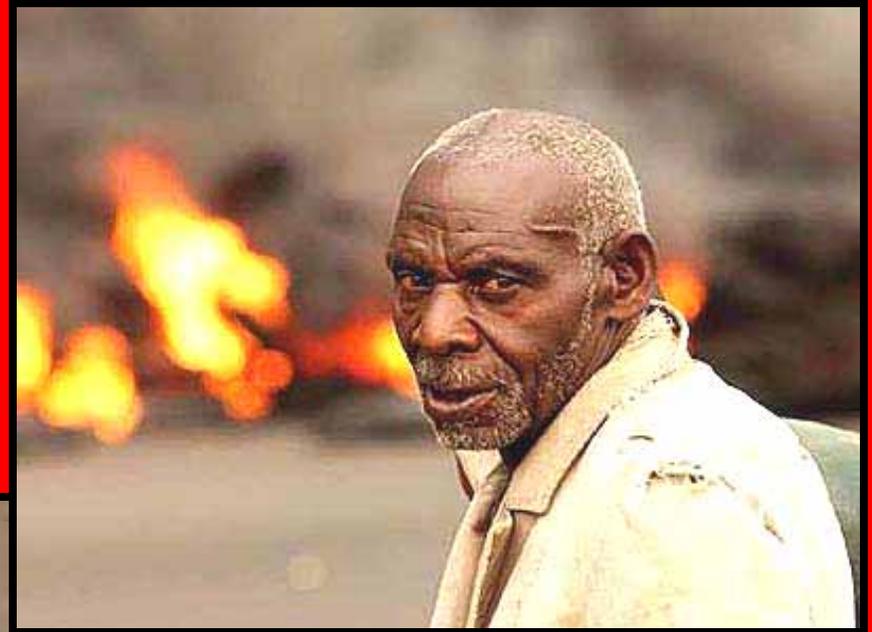




The 2002 Post-Volcano Response in Goma, DRC: An Example of Multi-Level DRR



**Destroying
up to 15,000
Houses**



But Where to Respond?



- **Do Nothing?**
- **Move City to New Site?**
- **Move People Out of Region?**
- **Move People West?**
- **Move People into Camps?**
- **Opt for a "City-focus"?**

- 
- Displaced *didn't* want to leave city, or live in camps
 - 87% of city *not* covered
 - Only area with services
 - Could easily absorb needs
 - Would reduce risk if stayed

**"City-focus"
as
Settlements
Strategy**

At a More Micro Level...

- 5,000-HH transitional shelter project
- Two-year, community-based volcanic and seismic hazard mitigation program: "Learning to Live With Your Risk"
- Two-year support program to the "GVO"





Jumping Right In...

**Reducing Flood Risk
in Bamako, Mali**

Before...



... and After



Linking Flood Mitigation and Livelihood Generation



Linking Flood Mitigation and Environmental Management



Linking Flood Mitigation and Public Health





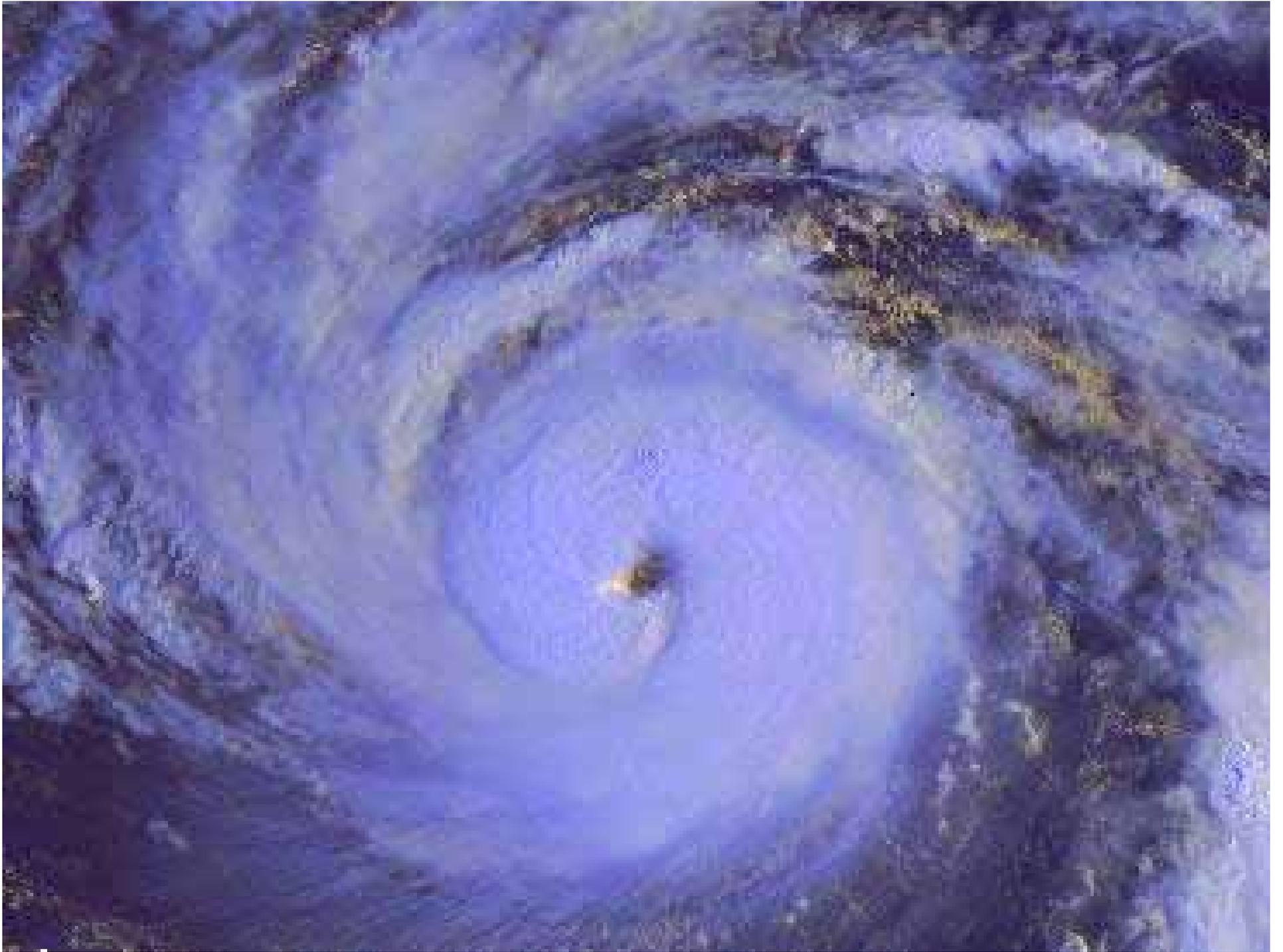
Look how CLEAN it is!

- 
- A photograph of a rural outdoor setting, likely a water collection point. In the foreground, there is a cobblestone-paved ground with several large, shallow metal basins and a bright yellow plastic bucket. A woman in a patterned dress stands in the middle ground, and a young child is visible near her. In the background, another person is standing near a doorway of a building. The overall scene suggests a community water collection area in a rural, possibly developing, region.
- Flood Hazard Mitigation
 - Livelihoods (refuse & composting)
 - Environmental Management
 - Public Health
 - “D&G” at local/national level
 - Replicated by other donors
 - Replicated by USAID throughout WA

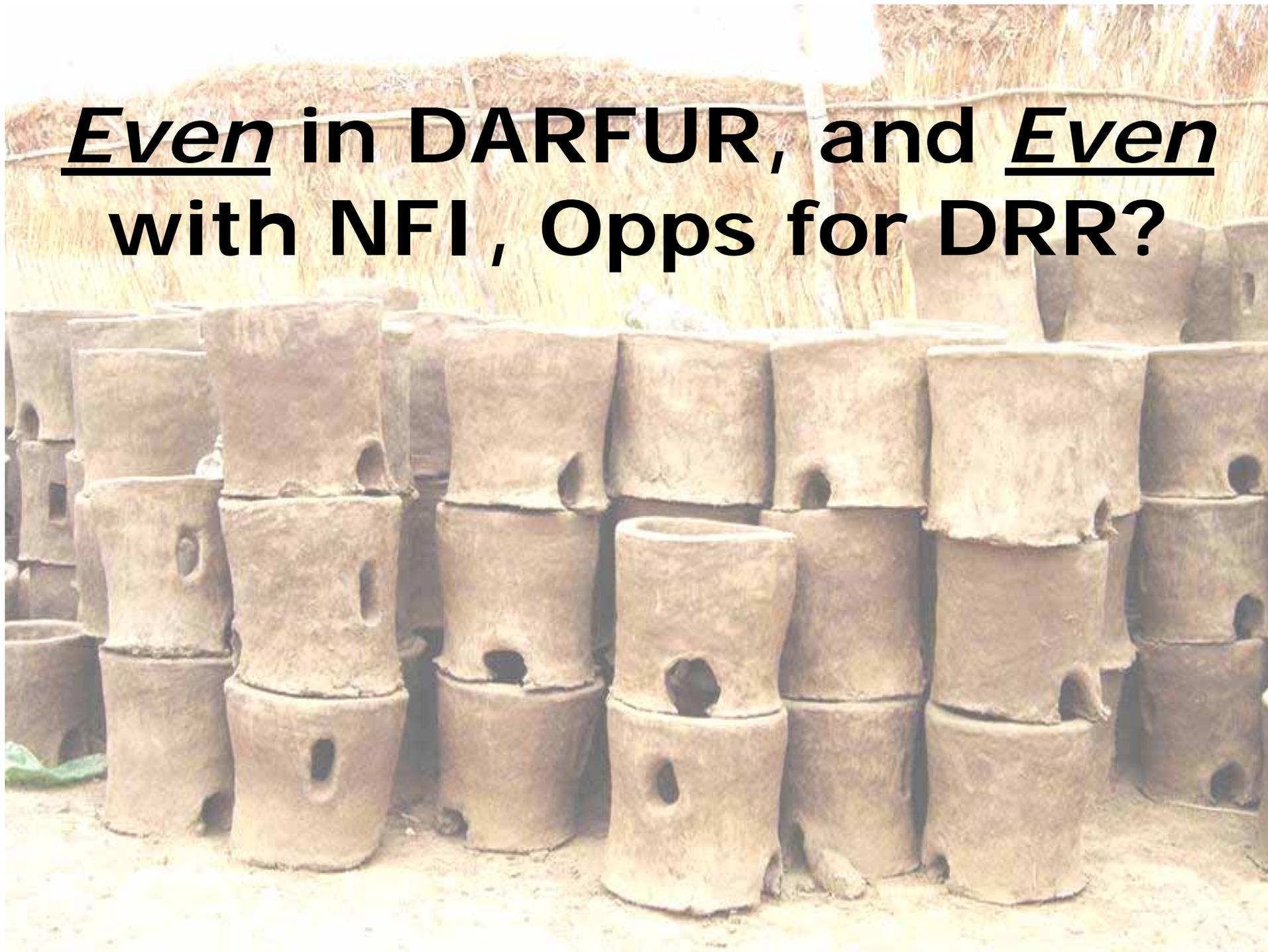
THE IMPACTS OF “HYDROMET” DISASTERS ARE NOT TRIVIAL

- From '98-'07, 2.77 billion affected, or 98.5% of total affected by natural disasters
- 2.77 billion = approx. 41% of global pop.!
- 867,000 people killed, or 84% of total killed by natural disasters
- \$805 billion in damages, or 85% of total caused by natural disasters

Source: WDR 2008, IFRCC



**Even in DARFUR, and Even
with NFI, Opps for DRR?**



To Learn More on DRR...

- **InterAction**,
<http://www.interaction.org/disaster/riskreduction.html>
- **Provention Consortium**,
<http://www.proventionconsortium.org>
- **Provention Consortium**, *Tools for Mainstreaming Disaster Risk Reduction: Guidance Notes for Development Organisations, 2007*,
http://www.interaction.org/files.cgi/6460_tools_for_mainstreaming_DRR.pdf
- **United Nations International Strategy for Disaster Reduction**, <http://www.unisdr.org>
- **UNDP**, *Building Disaster Resilient Communities: Good Practices and Lessons Learned, 2007*,
http://www.interaction.org/files.cgi/6461_UNISDR_ngos-good-practices.pdf
- **World Bank** Disaster Global Facility for Disaster Reduction and Recovery, <http://gfdrr.org/index.cfm?Page=home&ItemID=200>

A photograph of a volcano erupting at sunset or sunrise. The sky is a mix of orange, red, and yellow, with a large, dark plume of ash and smoke rising from the volcano. The volcano itself is a dark, conical shape in the foreground. The overall scene is dramatic and powerful.

**REMEMBER,
DON'T RISK THE RISK!**